



# State of Utah

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August 7, 2002

TO: Minerals File

FROM: Paul Baker, Senior Reclamation Biologist

RE: Site Inspection, Graymont Western US, Inc., Cricket Mountain Mine, M/027/006, Millard County, Utah

Date of Inspection: July 22, 2002

Time of Inspection: 10:00 a.m. to 2:00 p.m.

Conditions: Partly cloudy, 90's

Participants: Bob Robison, Marc Messenger, and Terry McIntyre, Graymont; Wayne Hedberg, Doug Jensen, and Paul Baker, DOGM

## Purpose of Inspection:

The inspection in March raised some issues that we wanted to resolve. Also, the bond review is due this year, and we needed to look at the site and compare it with current maps.

## Getting to the site:

The report for the March 1, 2002, inspection discusses how to get to the site.

## Observations:

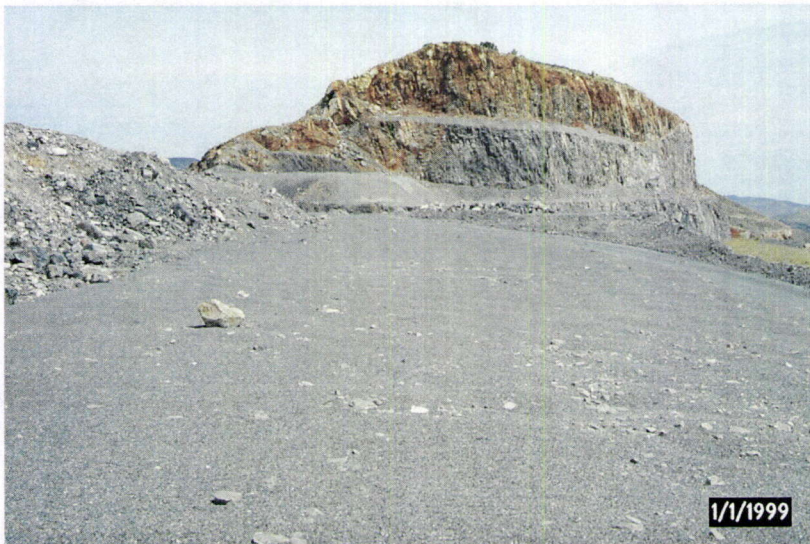
We first went to the dolomite quarry that is the newest of the three quarries. The operator has disturbed most of the area that will be disturbed and does not expect to go farther south on the mountain. There will be limited expansion to the east and west. Soil in the quarry area is very thin, and the operator has not salvaged topsoil from this area. Topsoil was salvaged from a material stockpile area at the base of the mountain.

We next went to some benches at the Poison Mountain Quarry that the operator has been trying to revegetate. Clearly the best revegetation is where the operator used six inches of topsoil (Photo 1). (Please note, the date on the photos should be July 22, 2002, the date of the inspection.) The operator applied fines to some areas and added straw as organic matter. There was little vegetation growing in these areas (Photo 2). The operator has been working this year to apply soil to some of the benches in the Poison Mountain Quarry (Photo 3 and Photo 4).





**Photo 1. Area revegetated using soil.**



**Photo 2. Area revegetated using fines and straw.**

Although the operator is gradually reclaiming the Poison Mountain Quarry, the access road will need to remain for now to accommodate potential future mining.

Originally, the west side of the Poison Mountain Quarry was apparently lined largely by cliffs, but these areas are now talus slopes (Photo 5 and the right side of the background of Photo 8).

During the March inspection, Mr. McIntyre asked whether it would be necessary to regrade one of the slopes in the west dump area. I understood him to be questioning whether the talus slopes mentioned in the previous paragraph needed to be regraded, but the area to which he was referring



Page 3

Graymont Western US, Cricket Mountain Mine

M/001/027

August 7, 2002

is a slope north of the talus slope. The area is shown in the center of Photo 4. The operator is currently in the process of topsoiling part of the waste dump and needs to know whether it will be necessary to revegetate the lower part of the slope.



**Photo 3. Area being topsoiled in preparation for seeding in the fall of 2002.**



**Photo 4. West waste dump at the Poison Mountain Quarry with the Flat Iron Quarry in the background. The operator does not want to regrade the area without topsoil near the center of the photo.**

We looked in some detail at one dump area on the north side of the Poison Mountain Quarry and discussed various reclamation options (see Photos 6 and 7). There appears to be a fair amount of soil that could be recovered from the area.





**Photo 5. Talus slope on the west side of the Poison Mountain Quarry.**



**Photo 6. Waste dump area on the north side of the Poison Mountain Quarry.**

At the Flat Iron Quarry, we looked in particular at the active waste dump to the south and east of the mine (dump No. 3) (Photo 8). This dump is largely in a small drainage, and although the operator has not been salvaging soil from this area, it appears there may be a lot of soil available.

Additional views of the mine area are shown in Photos 9 and 10. Photo 9 shows the crushing operations near the mine, and Photo 10 shows an area where reject material is being placed.





**Photo 7. Looking southwest in the area of the north waste dump. Note the soil that appears to be available to harvest.**



**Photo 8. Waste dump 3 in the Flat Iron Quarry area (foreground) with the west waste dump and the talus slope at the Poison Mountain Quarry visible in the distance.**

### **Conclusions and Recommendations:**

In those areas where the operator tried to revegetate the fines, we suggested that they apply composted manure at the rate of ten tons per acre and mix this into the fines either by gouging with a trackhoe or by ripping. We expect manure to work better than straw because it adds both organic matter and nutrients. Larger rocks placed on the surface should also be beneficial in these areas.





**Photo 9. Crushing operations below the Poison Mountain Quarry.**



**Photo 10. Fines disposal area north of the crushing operation shown in Photo 9.**

If the operator rips the surface, a broadcast seeder could be put on the back of the dozer so there is almost no time lapse from disturbing the soil surface before seeding.

We did not reach a conclusion about whether the operator would need to regrade and revegetate the lower part of the west waste dump except that, if this is a change from the current plan, the operator would need to submit a formal amendment to the mine plan with supporting justification.

Page 7

Graymont Western US, Cricket Mountain Mine

M/001/027

August 7, 2002

At the Flat Iron Quarry, the operator needs to salvage all available soil from all parts of the mine, but at the waste dump area in particular. Reclamation efforts have shown how valuable the soil is for reclamation, and there is a soil deficit in parts of the mine.

cc: Terry McIntyre, Graymont  
Bob Robison, Graymont  
Marc Messenger, Graymont  
John Blake, SITLA  
Larry Garahana, BLM Fillmore

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